

**What is claimed:**

1           1.       Said electromechanical valve actuator (300; 400; 500) for internal  
2 combustion engines, comprising a electromagnet (301; 401; 501) and a mobile magnetic  
3 plate (306; 406; 506) intended to come into contact with a part of the electromagnet, at  
4 least one said stop (B<sub>300</sub>; B<sub>400</sub>; B<sub>500</sub>) being located on the electromagnet (301; 401; 501)  
5 or on the plate (306; 406; 506) to limit the contact surface between the plate (306; 406;  
6 506) and the electromagnet (301; 401; 501), characterized in that the electromagnet  
7 (301; 401; 501) comprises a magnet in its magnetic circuit.

1           2.       Actuator in accordance with claim 1, characterized in that the stop (B<sub>300</sub>) is  
2 located essentially in the center of the contact surface between the electromagnet (300)  
3 and the plate.

1           3.       Actuator in accordance with claim 1 or 2, characterized in that the stop  
2 (B<sub>300</sub>) is located on an axis that is collinear with the axis of translation of the plate (306).

1           4.       Actuator in accordance with one of the claims 1, 2 or 3, characterized in that  
2 a plurality of said stops (B<sub>400</sub>; B<sub>500</sub>) are located on the electromagnet (401; 501) and/or on  
3 the plate, the stops between arranged symmetrically in relation to the axis of translation of  
4 the plate (406; 506).

1           5.       Actuator in accordance with one of the above claims, characterized in that  
2 the electromagnet (301; 401; 501) comprises an E-shaped magnetic circuit, and the stop  
3 (B<sub>300</sub>; B<sub>400</sub>; B<sub>500</sub>) is located at the end of one of the three essentially parallel branches of  
4 the E.

1           6.       Actuator in accordance with claim 5, characterized in that when the  
2 electromagnet (301; 401; 501) and the plate (306; 406; 506) are in contact with one  
3 another, the stop maintains an air gap between each end branch of the magnetic circuit of  
4 the electromagnet and the plate.

1           7.       Actuator in accordance with claim 5 or 6, characterized in that the magnet is  
2 located on the surface of one of the three essentially parallel branches of the E-shaped

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3 circuit, opposite the magnetic plate.

1 8. Actuator in accordance with claim 5, 6 or 7, characterized in that two  
2 magnets are located on the surface of the E-shaped circuit, and the stop is located  
3 between these two magnets.

1 9. Internal combustion engine equipped with a electromechanical valve  
2 actuator (300; 400; 500) for internal combustion engines, comprising a electromagnet  
3 (301; 401; 501) and a mobile magnetic plate (306; 406; 506) coming into contact with  
4 the electromagnet, characterized in that the actuator is according to one of the above  
5 claims.